

ABSTRACT OF THE DISCLOSURE

The present invention provides nonvolatile semiconductor memory devices and methods for manufacturing thereof, which provide inhibiting the shortcutting of the channel due to the creation of the bird's beak to promote the manufacturing of the devices with higher-density or higher-integration, lowering the operation voltage and improving the characteristics of maintaining the electric charge, without complicating the manufacturing process. Immediately after forming an ONO films 3 comprising a first silicon oxide film 3a, a second silicon nitride film 3b and a third silicon oxide film 3c on a silicon substrate 1, a silicon layer 4 is formed, and then, arsenic ions are implanted over the silicon layer 4 and/or ONO films 3 to form a bit line, and a second electrical conductive layer 7 is deposited while remaining the silicon layer 4 to form a word line comprising a dual layer structure of two electrical conductive layers. This inhibits the generation of the bird's beak to liberalize the limitation to the miniaturization due to the effect of the shortcutting of the channel, and prevents the deterioration of the characteristic for maintaining electric charge. Further, the interface between the ONO films 3 and the silicon layer 4 is stabilized by having a configuration of remaining a portion of the silicon layer 4 in the channel region.